

## **The pollution shadow: characterizing “local” and “global” air pollution in the Strait of Georgia**

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A number of recent studies have found elevated concentrations of Persistent Organic Pollutants (POPs) in high trophic level wildlife including killer whales, harbour seals and seabirds in the Georgia Basin - Puget Sound region. The biomagnification of POPs in aquatic food webs only partly explains the extent to which such wildlife are contaminated. Studies of contaminants in precipitation, salmon and other biota suggest that POPs are being transported through atmospheric processes to remote regions (and into food chains). In an effort to characterize the relative importance of “local” vs “global” contaminant sources, we have been sampling air (particulate and vapour) and precipitation at two sites in southern British Columbia: Saturna Island in the Strait of Georgia, and Ucluelet on the west coast of Vancouver Island (at the receiving end of prevailing weather from the west-southwest. Stations consist of a high-volume Quartz fibre filter - polyurethane foam (PUF) sampler operating 24 hours per day. Precipitation samplers collected contaminants using XAD-2 resin cartridges. Samples are being analyzed for a range of contaminants, including POPs. Our 12-month study began in January 2004, and is helping to characterize the relative importance of local vs global contributions to the contamination of coastal food webs in British Columbia and Washington.